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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/874,341	06/05/2001	Patrice Hirtzlin	PF000056	7856

7590 05/12/2006  
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EXAMINER

AL AUBAIDI, RASHA S

ART UNIT PAPER NUMBER

2614

DATE MAILED: 05/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

### Application No.

09/874,341

### Applicant(s)

HIRTZLIN ET AL.

### Examiner

Rasha S. AL-Aubaidi

### Art Unit

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicant's amendment filed on 12/22/2005 has been entered. No claims have been amended. No claims have been cancelled. No claims have been added. Claims 1-11 are still pending in this application, with claims 1 and 6 being independent.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1, 6 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scherer (US 5,790,959) in view of O'Byrne (US PAT # 5,731,699).

Regarding claim 1, Scherer discloses a radio frequency receiver (reads on receive programmable band select/ transfer module 40, see col. 2, lines 60-63) comprising: a radiowave receiving means, which convert an electronic wave into a first signal (receive programmable band select/ transfer module "rPST 40", see col. 2, lines 60-63 and co. 3, lines 45-50), a first mixer (or input mixer 35, see Fig. 2) which converts the first signal (see Fig. 2, col. 4, lines 12-16) into a second signal by a fixed (reads on Ftl01) of frequency transposition (see col. 4, lines 16-25), a filtering means (see Fig. 2, elements 39a-39c) which converts the second signal into a third signal by selecting part of the spectrum of the said second signal (see Col. 4, lines 30-42), a second mixer (or output mixer 37, see Fig. 2) which converts the third signal into a fourth signal (see Fig. 2) by frequency transposition by means of transposition signal coming from a frequency synthesizer, wherein the filtering means comprise at least two band-pass filters (Fig. 2, 39a-39c) of the split bandwidths (see col. 4, lines 35-37) provided with switching means (or S1a-S1b, Fig. 2) which make it possible to select only one of the filters.

Scherer does not specifically teach "having the bandwidth split in at least two selected working subbands separated by at least one non selected band".

However, O'Byrne teaches in Fig. 1 the signal transmitted by antenna 10 is received by antenna 12 and is fed to splitter 14. One of the split signals is fed to a wide bandwidth receiver (channel sounder receiver 22) and the second split signal is fed to

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narrow bandwidth receiver (spectrum analyzer 16). See col. 3, lines 6-67 and col. 4, lines 1-15.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the feature of splitting the received signal into a narrow band signal and a wide band signal, as taught by O'Byrne, into the Scherer system in order to preserve the best signal possible and to prevent signal loss and noise.

Claim 6 and 11 are rejected for the same reasons as discussed above with respect to claim 1. The claimed "transmitter" as recited in claim 6 reads on (transmit programmable band select/ transfer module "tPST 30", see col. 3, lines 56-57). O'Byrne teaches "frequency synthesizer delivers a transposition signal varying within a range depending on the width of the split bandwidth", see col. 1, lines 57-66. Also, it is inherent from Scherer's system that means for radio-wave transmission of the fourth signal (Four) are provided as the system functions of the embodiment of Fig. 2 are directed to transmission of signal.

4. Claims 2-5 and 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scherer (US 5,790,959) in view of O'Byrne (US PAT # 5,731,699) and further in view of admitted Prior Art by Applicant.

Regarding claims 2 and 7, the teachings of Scherer and O'Byrne are already taught in the above rejection. Neither Scherer nor O'Byrne disclose the use of "two filters having pass-bands of the same width".

However, Applicant admitted as prior art "If one is in the Ka band, the frequency assignment made by the various standardization organizations defines the various frequencies that can be used, which are sometimes non-contiguous. To obtain the desired bandwidth, it may be necessary to use non-contiguous bands in order to have a very broad bandwidth. As an example, it is possible to have a band consisting of two sub-bands, for example between 19.7 and 20.2 GHz and between 19.7 and 20.2 GHz separated by a forbidden band 900Mhz in width. The working bandwidth is then spread out over 1.9 GHz" (See Description of Prior Art, Page 2, lines 15-25).

Therefore, in view of the Applicant's admitted prior art, it would have been obvious to one of ordinary skill to modify the combination of Scherer's and O'Byrne system by providing two filters with the same bandwidth (as may be understood from having two sub-bands "between 19.7 and 20.2 GHz and between 19.7 and 20.2 GHz", each sub-band is 0.5 GHz) and thus in this manner be in compliance with the standards of different organizations regarding the non-contiguous manner in which some frequencies are disposed in the Ka band.

In regards to claims 5 and 10, Scherer discloses filtering means comprise “three filters with switching means which make it possible to select only one of the filters” (See *Fig. 2, elements 35, 37 and 39a-39c*).

However it can be seen that Scherer lacks “...two filters having the same bandwidth, the third filter having a bandwidth twice as broad and in that the frequency synthesizer delivers a signal whose frequency varies within a first frequency range, the width of which corresponds to the bandwidth of one of the two filters having the same bandwidth, and within a second range which corresponds to twice the first range.”

It would have been obvious to one of ordinary skill in the art at the time the invention was made to select a frequency or bandwidth that will be properly receive or transmit the band of interest, so these frequencies may be properly filtered. The Examiner believes that the frequency ranges and/or bandwidth processed by the filters chosen by the Applicant lacks criticality.

Claims 3-4 and 8-9 are rejected for the same reasons as discussed above with respect to claims 2 and 7.

### ***Response to Arguments***

5. Applicant's arguments filed 12/22/2005 have been fully considered but they are not persuasive.

On page 7 of the Remarks Applicant's argue "the bandwidth disclosed in Scherer col. 4, lines 35-37 are not split but are different". Examiner agrees with applicant that Scherer does not specifically teach the use of "split" or "splitting". However, Scherer teaches the use of bandwidths such as 40, 80 and/or 120 MHz (col. 4, lines 35-37). The Examiner interpreting the split bandwidth as the different bandwidth taught in Scherer. Note that, the use of "splitter" or "splitting" is basically a way to describe the generation of different bandwidths. This is relevant to simply generating different bandwidths such as the ones taught in Scherer.

Once again, the Examiner acknowledged in the previous office action mailed 08/23/2005 that Scherer does not teach "the bandwidth split in at least two selected working subbands separated by at least one non selected band". Therefore, the Examiner introduced O'Byrne teaches in Fig. 1 the signal transmitted by antenna 10 is received by antenna 12 and is fed to splitter 14. One of the split signals is fed to a wide bandwidth receiver (channel sounder receiver 22) and the second split signal is fed to narrow bandwidth receiver (spectrum analyzer 16). See col. 3, lines 6-67 and col. 4, lines 1-15.

Applicant also argues that "O'Byrne does not disclose the presence of a mixer and of a frequency synthesizer". Examiner respectfully disagrees with Applicant's argument because Scherer teaches the use of "a first mixer" and "a second mixer" and not O'Byrne (see above rejection). Thus, Applicant's argument is irrelevant.



Applicant's also adds "O'Byrne, similar to Scherer, neither discloses nor suggests that 'the frequency synthesizer delivers a transposition signal varying within a range depending of the width of the split bandwidths and on the width of the non selected bandwidth'". Again the Examiner believes that O'Byrne teaches that the first output generates a signal related to the wide bandwidth and the second output generates a signals related to the narrow bandwidth (see col. 1, lines 57-66). Thus, the claimed "transposition signal varying within a range depending on the width of the split bandwidth" is already taught in O'Byrne.

Regarding Applicant's argument "Scherer and O'Byrne are not concerned with using a single synthesizer to operate at over 1.9 GHz as is the present claimed invention". It is noted that the "single synthesizer to operate at over 1.9 GHz" is not recited anywhere in the claim language. It appears that Applicant is reading into the claim language. Therefore, Applicant's argument is irrelevant.

Examiner believes that other arguments are already addressed in the above rejection.

### ***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

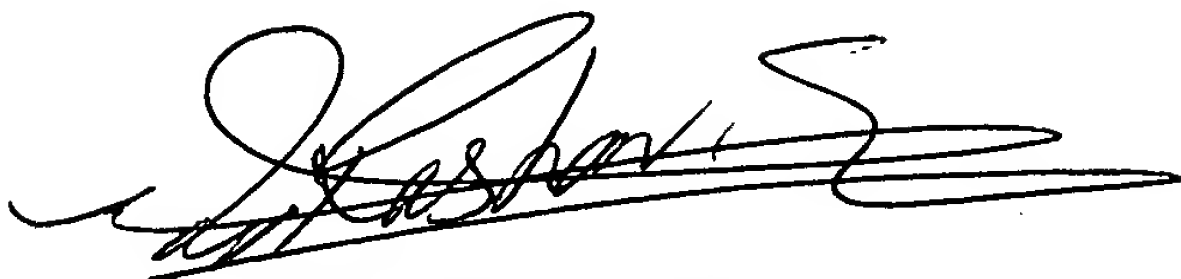
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rasha S AL-Aubaidi whose telephone number is (571) 272-7481. The examiner can normally be reached on Monday-Friday from 8:30 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing Chan, can be reached on (571) 272-7493.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in black ink, appearing to read 'Rasha S. Al-Aubaidi', with a stylized flourish at the end.

RASHA S. AL-AUBAIDI  
PATENT EXAMINER  
**Art Unit 2614**  
**05/11/2006**